PART NUMBERS

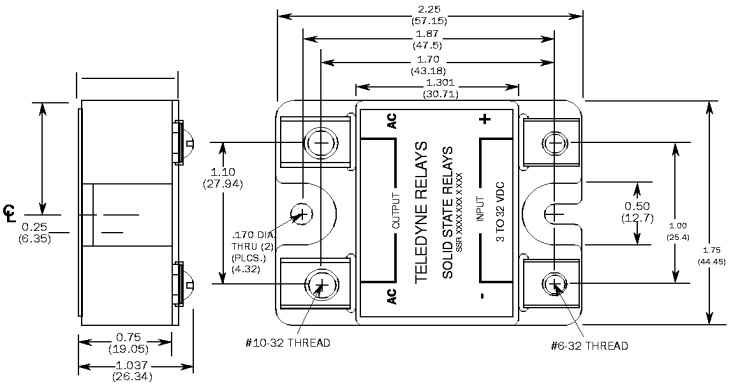
Package & Chip Type	Max Blocking Voltage (piv)/ Line Rating	Input Type	Output Current Amps	Options
SSR-SCR	**1600660**	**D**-DC Input	**10**-Triac	See Table
	1200480	Zero Cross	**25**-Triac	Below and
	600240	Switching	**25**	Page 58
		R-DC Input,	**40**	
SSRT-Triac	**600240**	Random	**55**	
		Turn-On	**75**	
		A-AC Input, Zero	**90**	
		Cross Switching	**125**	

Options (Add Suffix to Part Number) - See Page 58 for full description

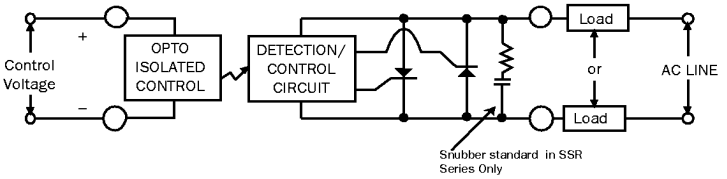
-002	Control Status LED	**-016**	MOV
-006	Faston Terminals	**-021**	TransAx™ (Available for **D** or **R** input SCR output only)
-007	-65°C Operation (SSR series only)	**-022**	24 VAC Control
-010	#8-32 Load Terminal Hardware	**-023**	0.1" Mounting Flange
-011	Terminal Extenders	**-026**	Non-Floating Output Terminals
-012	EZ Mount™	**-027**	VDE Certified Model Contact factory for certified part numbers.
-014	Plastic Cover		
-015	Output Snubber for SSRT series	**-031**	Nickel-plated Lead Frame

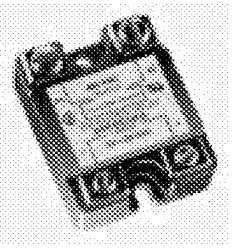
Part Number Example: SSR1200480D125

MECHANICAL SPECIFICATION



BLOCK DIAGRAM





FEATURES/BENEFITS

- Industry Standard Package.
- Floating screw type terminals in a high temperature plastic housing for exceptional ruggedness.
- Triac output option for economy; Back-to-Back SCR output option for higher current and voltage ratings.
- Constant Current Input minimizes source current requirement (standard on **D** and **A** inputs only)
- Exposed ceramic baseplate for reduced thermal resistance and best thermal performance.
- Constructed using Teledyne's unique Powertherm™ or Fused Copper™ (for higher current models) processes. These processes yield superior thermal impedance and power cycling capabilities through reduced thermal interconnections, allowing for cooler, more reliable operation.
- Optional TransAX™ transient eliminator offers up to 6000V Protection!
- Certifications:
  - UL and ULC Recognized File #E128555
  - CE # EN60947-1
  - VDE # 5928 (for applicable part numbers, see Option -027 on page 64).

TYPICAL APPLICATIONS

- On/Off controls of medium power AC equipment.
- Interfacing of microprocessor controls to AC loads - lights, motors, heaters, valves, solenoids etc.
- Electromechanical line relay replacement.
- Industrial and Process Controls.
- Uninterruptable Power Supplies.
- Robotics motor position and speed controls.
- Light dimmers.
- Transformer tap switch.
- Phase Proportional Drives

GENERAL DESCRIPTION

The SS/SSRT series AC Solid State Relays are designed to control heavy loads. Optical isolation ensures complete protection of control elements from load transients. Teledyne's advanced design featuring the Powertherm™ or Fused Copper™ process offers users superior thermal management resulting in superior performance, quality and reliability.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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ELECTRICAL SPECIFICATIONS

INPUT (CONTROL) SPECIFICATIONS

Parameter	Load Voltage/ Input Code	Min	Max	Units
Control Voltage Range	600240D	3	32	Vdc
	1200480D	3	32	
	1600660D	4.5	32	
	600240R	4	26	
	1200480R	4	26	
	1600660R	5	26	
	A	90	280	Vac
Input Current	D,R(@5Vdc)		15	mA
	A(@90Vac)		15	
Must Turn-Off Voltage	D,R	1		Vdc
	A	10		Vac
Reverse Voltage Protection	D,R		-32	Vdc
	A		N/A	
Turn-Off Current	D,R	0.25		mA(DC)
	A	2.5		mA(AC)

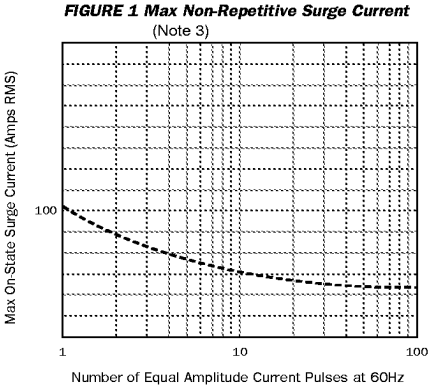
OUTPUT (LOAD) SPECIFICATION

Parameter	Voltage Code	Min	Max	Units
Load Voltage Rating	600240	24	280	Vac
	1200480	48	530	
	1600660	60	660	
Frequency Range (Note 2)		47	400	Hz
Over Voltage Range	600240		600	VPeak
	1200480		1200	
	1600660		1600	
On-State Voltage Drop @ Max Rated Current	Triac Output	1.5	V	
	SCR Output	1.7	V	
Turn-On Time	D,A		8.3	ms
	R		0.02	ms
Turn-Off Time			8.3	ms
Leakage Current (Off-State) @25 °C	SSRT =	0.5		mA
	SSR =	5		mA
	with -021 option	20		
dV/dt (Typical)			500	V/µs
Isolation (All Terminals To Heatsink) = VRMS For 1 Min With Unit Mounted Properly			4000	V
Operating Temperature		-40	125	°C
Power Factor Range		0.5	1.0	

OUTPUT (LOAD) SPECIFICATIONS (Contd)

Parameter	Output Current	Min	Max	Units
Output Current Rating (Load Current @85°C)	10	0.05	10	A
	25	0.05	25	
	40	0.05	40	
	55	0.05	55	
	75	0.05	75	
	90	0.05	90	
	125	0.05	125	
Surge Current Rating See Fig 1 (Non-Repetitive 16.7 mS)	10		100	A
	25		250	
	40		400	
	55		600	
	75		800	
	90		1000	
	125		1400	
Thermal Resistance Junction to Case (J_C)	10 Triac Output		0.6	°C/W
	25 Triac Output		0.6	
	25 SCR Output		0.4	
	40 SCR Output		0.35	
	55 SCR Output		0.35	
	75 SCR Output		0.3	
	90 SCR Output		0.3	
	125 SCR Output		0.25	

FIGURE 1 Max Non-Repetitive Surge Current
(Note 3)



NOTES:

1.) Where overvoltage transient spikes are present, suppression may be required. A suppressor and/or a snubber circuit across the AC terminals of the module will provide additional transient immunity.

2.) For 400 Hz inductive load, contact factory.

3.) Curve for 25 amp SCR output shown. Contact factory for other outputs.

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